bral tumor; intense cachexia of long duration, anemia and chlorosis would favor thrombosis.

Sinus thrombosis resembles clinically other disturbances in the vascular system, encephalitis, cerebral abscess, etc. Obstinate and violent headache in young anemic or chlorotic women should arouse a suspicion of sinus thrombosis. Changes in the eye ground resulting from congestion of the central vein of the retina or the cavernous sinus make the diagnosis of sinus thrombosis easier. Cachexia, anemia or chlorosis of long duration with suddenly developed headache and other cerebral symptoms, should arouse a suspicion of sinus thrombosis. Local congestion, limited disturbance of sensation, anomalies of movement (twitchings, convulsions, chorea) without changes in the temperature or pulse, render the diagnosis of sinus thrombosis probable. SPILLER.

232 UEBER AFFECTIONEN DER CAUDA EQUINA (Concerning Affections of the Cauda Equina). W. v. Bechterew (Deutsche Zeitschrift für Nervenheilkunde, Vol. 15, Nos. 3 and 4, p. 222).

Cases of disease of the cauda equina with necropsy are not very numerous. v. Bechterew reports a case in which a tumor developed in the left testicle, and was not removed until metastasis had occurred in the retroperitoneal region. The metastatic tumor penetrated the vertebral column, and caused pain by compression of the nerves. The vertebral column, already weakened by the ingrowth of the tumor, fractured during chloroform narcosis, and compressed the cauda equina in such a way that complete paralysis of the lower limbs was observed immediately after recovery from the narcosis. The symptoms in the case were anesthesia of the buttocks, the posterior part of the thigh, leg and foot, of the anterior surface of the leg, of the perineum, anus and penis; hypesthesia on the anterior surface of the thigh; paralysis of the gluteal muscles, of the muscles of the legs and flexors of the lower limbs; paresis of the extensors and adductors of both thighs; paralysis of the detrusor muscle and rectum; hyperesthesia of the scar in the scrotum and of the lower part of the abdomen; occasionally convulsive movements in the abdominal muscles. Paralysis of the sphincters was not very evident, but on the contrary paralysis of the detrusor vesicæ muscle existed. Cases of disease of the cauda equina with so extensive paralysis of sensation and motility, and with muscular atrophy, with relative integrity of the sphincters, have not been published, according to v. Bechterew. The fracture of the weakened vertebræ during narcosis was of much importance. SPILLER.

THERAPY.

233. THE PHYSIOLOGICAL ACTION OF THE ALKALOIDS DERIVED FROM ANHALONIUM LEWINII. W. E. Dixon (Journal of Physiology, 25, 1899, p. 69).

This drug, known for a long time to the Mexican, was first brought into prominence in 1888 by Lewin, for whom it was named. It first attracted attention by reason of its vision-producing properties, the which are attested to by numerous observers. Dixon here undertakes a careful study of the four alkaloids isolated by Heffter in 1896, anhalonnine, anhalonidine, lophophorine and mezcaline. These have been isolated and show close chemical affinities; anhalonnine and anhalonidine are isomeric and the others are closely related. The action of the drug is slightly complex on acount of the four alkaloids. There is an increase in salivary secretions, vomiting and diarrhea are present from large, but not from small, doses, the blood is not affected, the heart is affected, probably directly in its muscular substance, it is slowed and the force of the beat is increased in a manner somewhat analogous to the action of digitalis. Respiration is not affected in small doses, but in toxic amounts it becomes quicker and shallower; death usually resulting from respiratory centric paralysis. The effects on the nervous system were described early by Weir Mitchell. In mammals the effects are characteristic. Cats purr and prefer the dark, are soporific and stare "fixedly" with widely dilated pupils. The deeper reflexes are all exaggerated, but cutaneous sensations are blunted to the point almost of anesthesia. Ataxia with swaying is prominent in the gait. It would seem there is a preliminary stage of excitement in the action of the drug on the cerebral centers; this is usually marked by a sense of exhilaration, without much merriment, talkativeness is present to a marked extent, and the patients feel lightheaded. This stage is followed by one of intoxication, in which the tendency to lie down is manifest, though there is little or no inclination to sleep. The pupils are widely dilated and sluggish to light, inco-ordination in gait resembling alcoholism, is apparent and there is a well-marked generalized tremor. Muscular twitchings are not infrequent. Dual-existence sensations similar to those experienced in cannabis indica are not infrequent; the visual hallucinations are the most interesting and constant cerebral manifestations.

They seem at first to resemble the first optical sensations of migraine and then finally develop into other fantastic, bizarre and interesting shapes, though rarely of external objects. Coloring is intensified and often beautifully blended.

Some slight variation in the action of the alkaloids is apparent: Anhalonnine and anhalonidine are quite similar in their action, but lophophorine, while similar in action, is double the strength, especially in its action on the cord. Mezcaline acts apparently mostly on the visual centers. It is patent that "mescal" acts differently from any other known substance. It most closely resembles cannabis indica, but does not produce the feelings of merriment common to that drug. Its effects on the brain and cord are similar to those of strychnine, while its action on the heart suggests digitalis. Therapeutically, as a general stimulant to the nervous system it seems indicated and especially so in melancholia, where its action on the kinesthetic sensations render it applicable.

JELLIFFE.

234. THYMUS EXTRACT IN EXOPHTHALMIC GOITER. W. Rushton Parker (British Medical Journal, No. 1984, p. 12, Jan. 7, 1899).

The author reports four cases.

Case I. A well-marked case of three years' standing in a woman of twenty-eight. In six months she took 2,000 five-grain thymus tabloids, mostly ten to twelve daily, and ate a large number of lightly-cooked lambs' thymus glands, with no perceptible effect, although the patient "somehow professed to feel better at the end of the treatment than at the beginning."

The auther incidentally remarks that iron, digitalis, bromide, belladonna, arsenic and blistering were equally ineffective.

Case II. A woman of thirty-five, of a goitrous stock in a goitrous valley, presented the typical symptoms of Graves' disease, except those relating to the eyes. During eighteen months she took 5,000 five-grain thymus tablets, usually twelve daily, and ate many scores of lambs' thymus glands. She improved somewhat as regards general symptoms, but as she had notably improved during the two preceding years, the effect